

**AMENDMENTS TO THE CLAIMS:**

Please cancel claim 12, without prejudice or disclaimer of its subject matter, and amend claims 1 – 11 as indicated below. This listing of claims will replace all prior versions and listings of claims in the application:

**LISTING OF CLAIMS:**

1. (Currently Amended) A nuclear power plant comprising:  
a nuclear reactor-housing vessel in which a nitrogen gas is substituted for the inner  
atmosphere;  
a nuclear reactor pressure vessel housed in the nuclear reactor-housing vessel and  
connecting with a nuclear reactor primary cooling pipe;  
a reactor core arranged in the nuclear reactor pressure vessel; and  
a hydrogen removing apparatus , comprising: arranged within the nuclear reactor-housing  
vessel,  
wherein the hydrogen removing apparatus comprises a reactor having two openings for  
introducing the outer atmosphere into the reactor; circulating the gaseous materials within the  
nuclear reactor-housing vessel into the reactor, and a catalyst bed arranged within ~~said~~ the  
reactor and loaded with a catalyst for an ammonia synthesizing reaction between a nitrogen gas  
and a hydrogen gas.

2. (Currently Amended) The ~~hydrogen removing apparatus~~ nuclear power plant  
according to claim 1, wherein a catalyst for a water synthesizing reaction between an oxygen gas  
and a hydrogen gas is further loaded in said catalyst bed arranged within said reactor.

3. (Currently Amended) The ~~hydrogen removing apparatus~~ nuclear power plant according to claim 1, wherein at least one element selected from the group consisting of Ru, Pd, Pt, Ir, W, Ag, Au, Rh and Re is used as said catalyst and said catalyst is contained in the catalyst bed in an amount of 0.1 to 50% by weight.

4. (Currently Amended) The ~~hydrogen removing apparatus~~ nuclear power plant according to claim 1, wherein said catalyst bed comprises said catalyst and a catalyst carrier consisting of at least one material selected from the group consisting of SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, TiO<sub>2</sub>, ZrO<sub>2</sub> and C.

5. (Currently Amended) The ~~hydrogen removing apparatus~~ nuclear power plant according to claim 4, wherein said catalyst carrier has a specific surface area falling within a range of between 10 m<sup>2</sup>/g and 200 m<sup>2</sup>/g.

6. (Currently Amended) The ~~hydrogen removing apparatus~~ nuclear power plant according to claim 1, wherein said catalyst bed further contains at least one co-catalyst selected from the group consisting of CeO<sub>2</sub>, La<sub>2</sub>O<sub>3</sub>, MgO, K<sub>2</sub>O, Na<sub>2</sub>O, CaO, CsOH and CsNO<sub>3</sub>.

7. (Currently Amended) The ~~hydrogen removing apparatus~~ nuclear power plant according to claim 6, wherein said co-catalyst is contained in the catalyst bed in an amount of 1 to 30% by weight.

8. (Currently Amended) The ~~hydrogen removing apparatus~~ nuclear power plant according to claim 1, wherein said catalyst bed consists of a plurality of plate-like cartridges loaded with granular catalyst particles and arranged a predetermined distance apart from each other.

9. (Currently Amended) The ~~hydrogen removing apparatus~~ nuclear power plant according to claim 1, wherein said catalyst bed consists of a cylindrical cartridge loaded with granular catalyst particles, said cartridge having gas circulating sections formed in at least the top portion and the bottom portion of the cartridge for circulation of the gaseous materials present both inside and outside the cartridge.

10. (Currently Amended) The ~~hydrogen removing apparatus~~ nuclear power plant according to claim 1, wherein said catalyst bed is in the form of a molded honeycomb structure having meshes supporting at least a catalyst.

11. (Currently Amended) The ~~hydrogen removing apparatus~~ nuclear power plant according to claim 1, wherein at least one heat generating body for heating the catalyst, which is selected from the group consisting of calcium oxide, sodium oxide, strontium oxide and a hydrogen absorbing metal, is housed in said reactor.

12. (Canceled)